

B.A.R.G. NEWS

The official Newsletter of the Ballarat Amateur Radio Group Inc. (#6953T)

CLUB ROOMS
BALLARAT AIRPORT
UNIT 31

P.O. BOX 1261
MAIL CENTRE
BALLARAT VIC 3354

MEETING DATES

At Club Rooms 8pm start

July 26th.

August 30th. (AGM)

September 27th.

October 25th.

November 29th.

Volume 25 Number 7

JULY 2002



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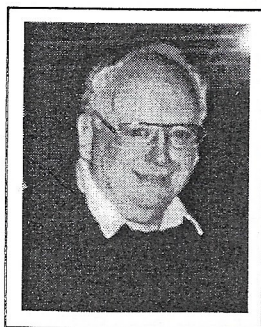
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REMEMBER that the August Meeting is the A.G.M. and all positions become vacant. If you can contribute to the operations of BARG by filling any one of the positions, then nominate by completing one of the forms in last month's Newsletter and sending it to the Secretary ASAP.

Your participation will be appreciated. Tnks.



THE
EDITOR

"NORM"

VK3LBA

10 METRE NET

Steven – VK3MNA invites all members to join him on the new BARG 10M Net on Tuesday nights at 8.00 pm.

Tune in on the Net Frequency of 28.475 mHz and have a chat.

Heard at a Bank:

"If you see your way clear to give me an overdraft, I'll be forever in your debt !"

Heard on air:

" I had better go QRT for lunch, or I'll have this rig wrapped aroun - - - - -"

Inc. # 6953T

OFFICE BEARERS – 2001 / 2002



COMMITTEE



PRESIDENT	GEOFFREY SMITH	VK3ADB	VALERIE	5345 8387
VICE PRESIDENT	GORDON CORNELL	VK3FGC	HELEN	5339 2427
SECRETARY	TOM GEORGE	VK3DMK	ELAINE	5333 2770
TREASURER				
MEMBER'S REP.	DOUG RAPER	VK3VBA	VAL	5332 3565
MEMBER'S REP.	CHARLIE STEWART	VK3DCS	SHIRLEY	5331 7425
MEMBER'S REP.	IAN LLOYD	VK3HFK	DEBBIE	5331 1480
MEMBER'S REP.	STEVEN DICK	VK3MNA	MARY	5331 5526
MEMBER'S REP.	PETER DIPROSE	VK3KDP	MARION	5339 9928
MEMBER'S REP.				

OFFICERS

QSL MANAGER	DARYL QUIRK	VK3XDQ	WENDY	5476 2689
EDUCATION OFFICER	TOM GEORGE	VK3DMK	ELAINE	5333 2770
TECHNICAL OFFICER	BOB TERRILL	VK3BNC	BETTY	5339 5317
NEWSLETTER EDITOR	NORM D'ANGRI	VK3LBA	VAL	5334 1613
NET CO-ORDINATOR	CLEM ALLAN	VK3BVI	PAT	5348 7709
AWARDS MANAGER	REG CARTER	VK3CAZ	SHELAGH	5341 7585
HISTORIAN/LIBRARIAN	DICK CURNOW	VK3LDC	MARY	5330 1927
EXAMINATION OFFICER	CHARLIE STEWART	VK3DCS	SHIRLEY	5331 7425
MEMBER REGISTRAR	NORM D'ANGRI	VK3LBA	VAL	5334 1613
PUBLICITY OFFICER	DOUG RAPER	VK3VBA	VAL	5332 3565
PROPERTY OFFICER	JEFF PIGDON	VK3PAP	LYN	5332 7041
WICEN STATE CO-ORD.	GORDON CORNELL	VK3FGC	HELEN	5339 2427
HAMVENTION CO-ORD.	STEVEN DICK	VK3MNA	MARY	5331 5526
SCRAMBLE CO-ORD.	REG CARTER	VK3CAZ	SHELAGH	5341 7585
AMENITIES COMMITTEE	SHIRLEY STEWART	SWL	CHARLIE	5331 7425
	SHELAGH CARTER	SWL	REG	5341 7585
	BETTY TERRILL	XYL	BOB	5339 5317
	MARY CURNOW	VK3FMC	DICK	5330 1927
	PAT ALLAN	XYL	CLEM	5348 7709
	VALERIE SMITH	XYL	GEOFFREY	5345 8387

BARG REPEATERS

VK3RBA	VOICE	146.750 MHz	Mt Buninyong
VK3RWA	VOICE	147.100 MHz	Ben Nevis
VK3RPC	PACKET	144.750 MHz	Mt. Warrenheip
VK3RBU	VOICE	438.475 MHz	Mt. Hollowback.
VK3RMB	BEACON	432.535 MHz	Mt. Buninyong
VK3RBV	ATV	426.250 MHz	Ballarat

BARG LIFE MEMBERS

VK3CFB	JIM WRIGHT
VK3AXH	IAN MC.DONALD
VK3WN	KEVIN HUGHES
exVK3AQM	PHIL SEDDON

10M NET": Tuesday Nights 8 pm.
28.475 mHz

ACTIVITIES

CLUB NET: Thursday Nights at 8 pm. (8.30 pm during Daylight Saving.) Freq.: 3.610 MHz +/- QRM.
MEETINGS: General Meeting : Last Friday each month (except December) at 8.00 pm. at Club Rooms.
CLUB ROOMS : Ballarat Airport – Unit 31 – (Off Learmonth Road) Ballarat.

HAMVENTION : Last weekend in October (2002 – 27th October.) **FOXHUNTING:** 5/6th October

CONSTRUCTION DAYS : Saturday afternoons at clubrooms - 1 pm.

CORRESPONDENCE TO: The Secretary. BARG Inc.. BOX 1261 MAIL CENTRE. BALLARAT 3354

NEWSLETTER ARTICLES TO: Norm D'Angri (VK3LBA). 29 Lawrence St. Alfredton Vic. 3350

email: <nda@vic.australis.com.au>

B.A.R.G. HOMEPAGE: www.barg.org.au

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The Minutes - 28th June 2002

Meeting opened at 7:58pm by Geoff VK3ADB

A Minutes silence to remember Stan VK3SE, Life Member, now silent key.

Apologies: DCS, NIZ, CAZ, Shielah, DCS, Shirley, YNB, CFH, BVI, Pat HRZ/VBA

Minutes: As read in newsletter. DMK/MNA

Correspondence IN: Commonwealth Bank, Neighborhood Cable, Origin, VK3MNA, City of Ballarat, Newsletters,
ARDF information (VK3WWW),
OUT: FGC/KGL

Treasurers Report: As tabled.

Origin, Ballarat Council, Neighbourhood Cable are now direct debit.

Education: Three candidates doing well.

Tech: IRLP now has station licence, ident to change from VK3HEG and is fully operational.
Packet work has been carried out on VK3RPC and VK3BML.
BBS VK3KAY causing traffic problems on 144.750MHz, Letter to be forwarded to Vk3KAY about the matter.
VK3AAI & VK3BNC

Hamvention: Club requires new Hamvention Co-Ordinator.
ARDF details.

WICEN: AGM 20th July, 11th August 2002 WICEN Field Day. FGC

Publicity: RD Contest 18th August.

GENERAL BUSINESS:

BARG to compete in RD Contest from club rooms AXH

VK3MNA resignation as Hamvention Co-Ordinator regrettably accepted. FGC/CIS

AXH has offered to help, but not possible to be full time.

Motion: VK3FGC and VK3PAP be appointed auditors for current financial year report to AGM. HRZ/KGL

BARG to have a NET frequency on 10M, 28.475 MHz, so members can chat, use at anytime, Tuesday Nights
8:00pm net call in. VK3MNA

Neighbourhood Cable links to be added to clubs WEB Page.

If members have internet access then they can be assigned a BARG E-Mail address.

eg vk3heg@barg.org.au

vk3dmk@barg.org.au

Contact Stephen VK3HEG
Dinner 12th July Royal Oak.

Meeting Closed 9:00pm. NEXT MEETING 26th July.

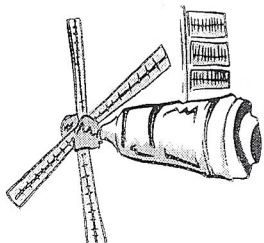
SILENT KEY

It is with deep regret that we record the passing of our esteemed Life Member

STAN WIDGERY – VK3SE

Stan endeared himself to all BARG members with his participation in club activities over many years, and in particular his interest and perseverance in the teaching of CW to aspiring 'Hams'.

VALE – STAN VK3SE



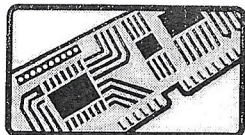
Daryl's Space

Articles supplied by Daryl – VK3XDQ - Tnx Daryl

- ◆ A bum, who obviously has seen more than his share of hard times, approaches a well dressed gentleman on the street. "Hey Buddy, can you spare a couple of dollars ?" The well dressed gentleman responds. "You are not going to spend it on liquor are you ?" "No Sir, I don't drink," retorted the bum. "You are not going to throw it away gambling are you ?" asked the gentleman. "No way, I don't gamble," answered the bum. "You wouldn't waste the money at a Hamfest on radio gear would you, ?" asked the man. "Never," said the bum "I'm not a Ham." The man then asks the bum if he would like to come home with him for a home cooked meal. The bum accepts eagerly. While they are heading for the man's house, the bum's curiosity gets the better of him. "Isn't your wife going to be angry when she sees a guy like me at your table ?" "Probably," says the man, "but it will be worth it. I want her to see what happens to a guy who doesn't drink, gamble, or go to Hamfests. !"
- ◆ This month scientists are celebrating the 40th anniversary of the world wide transmission of TV by satellite.
- ◆ Researchers from the US Department of Energy's National Laboratory have provided a hypothesis that "black holes" are not holes at all, but are more akin to "bubbles" in space.
- ◆ In Russia, preparations and testing are in advance of the schedule for the Planetary Society's orbital sail mission called COSMOS. The first ever solar sail is scheduled for launch later this year aboard a Russian submarine-launched Volna rocket.
- ◆ If a scientist in Houston has his way, you'll be able to say goodbye to pollution causing energy production from fossil fuels. In the April / May issue of "The Industrial Physicist" Dr Criswell suggests that the Earth could be getting all the power it needs using solar cells on the moon.

B.A.R.G. MEMBERS AS AT JULY 2002

CALL	SURNAME	1st NAME	OM / XYL	CALL	SURNAME	1st NAME	OM / XYL
VK3BVI	ALLAN	CLEM	PATRICIA	VK3LPM	MACKAY	RON	LILLIAN
VK3KCA	APPLEBY	CEDRIC		VK3YNB	MC CONNELL	DAVID	
VK3CJB	BROWN	JOHN	RUTH	VK3AXH	MC.DONALD	IAN	NOLA
VK3WBB	BROWN	BOB	VIRGINIA	VK3YJM	MIKKELSON	JEFF	
SWL	CARTER	SHELAGH	REG	SWL	MORLEY	TED	
VK3CAZ	CARTER	REG	SHELAGH	VK3PAP	PIGDON	JEFF	
VK3IDC	CHENNELL	IAN		VK3VBA	RAPER	DOUG	VAL
VK3BQC	COLLIER	IAN		VK3AFR	RODE	FRED	JUTTA
VK3CMC	COOK	CRAIG	LYN	SWL	SEDDON	PHIL	CHRIS
VK3FGC	CORNELL	GORDON	HELEN	VK3FAQ	SELLERS	BOB	
VK3FMC	CURNOW	MARY	DICK	VK3TJ	SMETHURST	JOHN	ROS
VK3LDC	CURNOW	DICK	MARY	VK3ADB	SMITH	GEOFF	VALERIE
VK3LBA	D'ANGRI	NORM	VALDA	VK3JEM	SNIBSON	LES	
VK3MNA	DICK	STEPHEN	MARY	VK3CIS	STANLEY	IAN	KATHY
VK3KDP	DIPROSE	PETER	MARION	SWL	STEWART	SHIRLEY	CHARLIE
VK3AAI	FELSTEAD	MURRAY	KAREN	VK3DCS	STEWART	CHARLIE	SHIRLEY
SWL	FOWLER	FLORIS		VK3BNC	TERRILL	BOB	BETTY
VK3DMK	GEORGE	TOM	ELAINE	VK3UR	TILSON	DAVID	
VK3AIQ	GLENN	JAMES		VK3DET	TURNER	ERNIE	
VK3HRZ	GRAINGER	KATHY	IAN	VK3HEG	WALSH	STEPHEN	
VK3CFH	HAZLEDINE	JOHN	MONICA	VK3PAL	WELLS		
VK3KGL	HEKKMA	HARRY	THERESE	SWL	WICKSON	KEVIN	
VK3PH	HEWITT	BILL	OLIVE	VK3CFB	WRIGHT	JIM	
VK3WN	HUGHES	KEVIN	PEARL	VK3ABI	YORKE	GORDON	LORIS
VK3DS	LANCE	GEORGE	JOAN				
VK3HFK	LLOYD	IAN	DEBBIE				
					TOTAL	50	



TECH TALK

FROM REG. – VK3CAZ

IT'S JUST A MATTER OF TIME REALLY !

Listening to David VK3UR telling us of the mysterious workings of the GPS Position Fixing System at the Clubrooms the other night, my mind wandered back over the years to the first of the long series of 'timing systems' which have led to the almost unbelievable accuracy of position fixing that the GPS system can offer.

I suppose it is a matter of just how accurately you can measure time that leads to the advances in 'radio position finding' we have seen over the years. Back in 1940 a Mr R. J. Dippy, then employed at the U.K. Telecommunications Research Establishment, put forward a suggestion, followed by a demonstration, of hyperbolic position fixing made possible by measuring the time difference between reception of carefully synchronised transmitters spaced some considerable distance apart. The system worked by means of aligning the signals on a CRO and then referring to a map covered with hyperbolic lines of 'equal delay'. To simplify the use of the device they even invented a new unit of time known as the "Gee Unit" since the whole thing was cloaked in wartime secrecy and known as "GEE". This unit of time was equal to 66.66 microseconds and could be easily measured down to 0.66 microseconds on the "GEE" screen.

When GEE entered service in 1941 the position determined by it was within a kilometre at close ranges but deteriorated at long range to an ellipse of about 1 km by 6 km. This sounds pretty poor, but to an aircraft navigator it was well inside the accuracy delivered by "DR" and better than that of an astro-sight, what with the bouncing around of the aircraft and the difficulty in finding a clear sky to make the sextant readings. All of this was carried out using VHF frequencies in the range of 20 MHz to 80 MHz by means of 'plug in' RF units with a common receiver and indicator.

The Americans of the Radiation Lab were intrigued by the performance of GEE, but needed to develop a much longer-ranged version for use in the Pacific Region where they were already aware of the certainty of war with Japan. R.J. Dippy went to the U.S. to lend a hand and the decision was taken to move DOWN in frequency, eventually ending up in the 160 metre amateur band where it remained until its demise. It accepted that propagation via the ionosphere and the consequent variable path length would spoil the absolute accuracy, but in the wide spaces of the Pacific Ocean a 'fix' with an error of as much as 20 miles was negligible compared with the distances involved. The eventual versions of Loran synchronised each other via the sky wave and this permitted the spacing of the ground stations to be as much as 2000 km apart, improving the coverage and strangely enough improving the accuracy of the fix due to the better synchronisation !

Another offshoot of GEE was the Decca Navigator originally designated QM by the British Admiralty and used to guide the Normandy landings on D Day but withdrawn shortly afterwards to preserve its secrecy for further use if needed. It differed from both GEE and Loran in using low frequency continuous waves around the 100 kHz region. It functioned by measuring the relative phase differences between the master and slave stations, and could deliver positional accuracies of tens of metres. It was later developed for commercial use by Decca and proved valuable in guiding shipping in confined waters. Both GEE and Loran gave birth to systems known as SHORAN and GEE-H where the stations were interrogated by the aircraft rather than radiating continuously and this improved the accuracy several fold.

OMEGA came along in the 1960 period and gave increased accuracy again, using very low frequencies, but as in all the others, relying on the accuracy of time measurement to give a position. Indeed they got so accurate when developing Loran that it was necessary to revise the accepted values of the speed of light since the RADAR systems were of greater



IT'S JUST A MATTER OF TIME REALLY ! (Continued)

accuracy than expected.

In 1941 the accepted value for the speed of light was 299,776 +/- 4km/s . Developing microwave techniques permitted more accurate values to be determined , and over a period of time it varied between 299,764 +/- 15km/s then 299,792 +/- 2.4km/s and eventually the LASER determined the present value of 299,792.458 +/- 0.0012km/s but even then the laser was the result of microwave radar research into MASER activity.

There is even an amateur connection with the early GEE and LORAN in that they used a technique which we learnt as "rubber crystals" although nowadays we refer to them as VXOs when we use them in our hobby (sounds more scientific I suppose). In the case of GEE the timing oscillator was a 75 kHz crystal doubled up to 150 kHz whilst LOAN used a 100 kHz crystal . In order to get the signals lined up with sufficient accuracy it was important to be able to 'pull' the frequency of the receiver system into exact correlation with the very carefully maintained oscillator of the 'master' station, and so crystals of relatively poor stability were developed to permit this variation, and so provide very accurate short term synchronisation.

So there we are ! In less than sixty years we have gone from being amazed at the ability to fix our position on the Earth's surface to an accuracy of several kilometres to a world where we can measure it to an accuracy of a few centimetres, thanks to accurate time clocks.

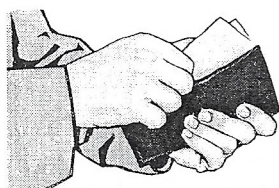
73 de Reg VK3CAZ.

A REMINDER

That membership fees are now due
for 2002 / 2003.

Single \$25.00 - Family \$40.00

Please pay promptly and ensure the continued
mailing of your Newsletter.



P	T	M	H	Y	Z	M	S	W	P	O	Y
W	R	S	Y	T	R	E	P	O	R	P	F
E	E	E	J	I	T	N	H	J	O	S	W
U	A	C	S	C	R	Q	I	J	T	M	L
I	S	R	R	I	Z	O	G	Y	A	A	S
F	U	E	E	L	D	V	T	Y	C	X	Q
L	R	T	B	B	T	E	Y	I	U	E	G
A	E	A	M	U	Y	H	N	Z	D	X	F
J	R	R	E	P	W	H	K	T	E	E	O
S	B	Y	M	H	C	E	M	L	S	T	A
Z	H	P	G	E	S	Y	P	T	H	I	B
G	V	Q	T	U	T	P	N	O	Q	K	R

MEMBERS OF THE BOARD

PRESIDENT
PROPERTY
PUBLICITY
QSL

EDITOR
EDUCATOR
EXAMS
MEMBERS

SECRETARY
TECHNICAL
TREASURER



WORDS FROM THE WISE

POLI means 'many'.

TICS are 'blood sucking parasites.'

POLITICS ?

Dog Biscuits are made from
'Collie' flour.

If the enemy is in range
So are you !

NEW EMAIL ADDRESS FOR EDITOR:
<nda@vic.australis.com.au>



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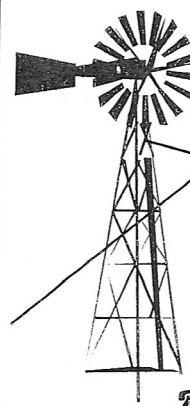
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COMPUTERS**

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5333

4655



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WILTSHIRE LANE

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CLEANER
500 ml spray

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100 gm. Tubes

WINDSCREEN WASHER
CONCENTRATE
500 ml.

ENGINE DEGREASER
400 gm. Aerosol and 1 ltr. Tins.

DWF for TIGHT NUTS.

73 Bell VK3PH.

MOWING ROSTER



MAY	John VK3CFH	Bon VK3WBB
JUNE	Steven VK3MNA	Ian VK3CIS
JULY	Bob VK3BNC	Ian VK3HFK
AUGUST	Geoffrey VK3ADB	Kevin VK3WN
SEPTEMBER	Gordon VK3FGC	Ian VK3AXH
OCTOBER	Jeff VK3PAP	John VK3CFH
NOVEMBER	Bob VK3WBB	Steven VK3MNA
DECEMBER	Bob VK3BNC	Ian VK3HFK
JANUARY	Geoffrey VK3ADB	Gordon VK3FGC
FEBRUARY	Ian VK3AXH	Bob VK3BNC

If you have any problems with the roster, motor mower or
fuel, please contact Bob VK3BNC or Geoffrey VK3ADB.

Thanks for your help.

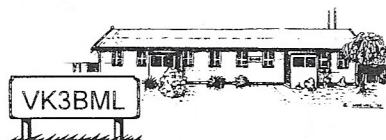


PLEASE NOTE

The content of this newsletter is dependent upon the contribution of articles from the members. If you have a story to tell or a project to share, please contact the editor at: 29 Lawrence St. Alfredton 3350 . (email: <nda@vic.australis.com.au >) or hand to a Committee Member at the meetings.

CUT OFF DATE FOR ARTICLES FOR PUBLICATION IS NOW THE SECOND MONDAY OF EACH MONTH.

B.A.R.G. The Ballarat Amateur Radio Group Inc.



A group of radio enthusiasts licensed to experiment with local and international radio communications on an amateur basis.

NEW MEMBERS ALWAYS WELCOME.



IF UNDELIVERABLE
PLEASE RETURN
TO: BOX 1261
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B.A.R.G. NEWS

